Appendix A.27

County Social Area Analysis Lesson - Hope High School – Non GIS Version

Urban Geography Lesson - County Census and School Data

1. Analyze the Census Tract map 1.

2. These are County Census Tracts for the 1990 Census. Notice the different sizes of the tracts. Tracts are designed to contain approximately 4,000 people.

   A. Why would our federal government count people in smaller areas and larger areas? Why aren't all the tracts the same size?

   B. What does the physical geography of an area have to do with the shape and the area of a tract?

1. The chart below represents some data for the Census Tracts. Fill in the missing data and compare against the population tract map.

Area of the Tract (square miles)	1990 Population	1997 Population	Percent Population Change 1990-1997	1990 Population per square mile
298.74	6781	10967		
5.30	4466	4506		
4.75	8042	9036		
.70	1327	1289		
1.02	2194	2193		
1.51	5316	5258		
.85	4500	4104		
1.53	1411	1677		
2.57	7826	10873		
13.03	4427	6684		

What are two observations you can make about the data in this chart?
A._____

B._____
_____

4. Now, look at the same data on you're the County map and look at the tracts' data geographically. Analyze the maps showing the following data – area (map 2), population 1990 (map 3), population 1997 (map 4), and population per square mile (map 5). Now look at your map.

A. Which way do you prefer to look at the data-on the map or in the chart above? Why?
_____
_____
_____

B. What three conclusions can you make about population, population growth and population density in your county?
1._____

2._____

3._____

5. How does the physical geography of the County impact population density and growth?

6. Let's look at more specific data. Look at your block group outline map 6. What do you notice about the overall Block Group map compared to the Tract map?

7. Now look at the Block Group map with one of the same variables from the classification field that you looked at above with the Census Tracts: area (map 7), population 1990 (map 8), or population per square mile (map 9). How is this map similar or different from the data above on the same variable?

8. Block groups are extremely specific pieces of data while tracts are combined block groups. Which type of careers might require you to analyze data on one level versus the other?

Tract data:

Block group data:

9. Now look at streets in this county (map 10) to better understand where things are. What do you notice about streets throughout the county?

10. Let's find the street where you live, and your high school (map 10).

11. How may physical geography clues have helped you find your street? Would it have been easier if the map were topographic or if there were water bodies (rivers, reservoirs) labeled?

12. Look at the Block Group map in the vicinity of your high school and look at the variables above: 1990 population (map 8) and population density (map 9). What can you tell about your street? Or block? And the high school's neighborhood?

_____

13. Let's measure some things (map 15).

A. At the farthest points, how many miles long and wide is the County?_____
_____

14. We need to add a few urban geography features. Add these location points on map 15. Let's add a point marker for the the County Airport at 120th and Wadsworth. Also mark a couple of shopping malls and a couple medical facilities throughout the county. You can use the phone book if you need some addresses.

A. What is interesting about the location of the airport?_____
_____

B. What is interesting about the location of malls and hospitals?_____
_____

C. Are there other places in our county where you would place an airport? Why or why not?

_____

A. How many airports does the County have?_____
How many shopping malls and hospitals does it have?_____
Why do we need more of one service than of another service?_____
_____

E. Without knowing the history of Broomfield and Westminster, what is your hypothesis of how the development of the airport and suburbs came to be?

_____
_____

15. Look at the map showing the main highways (map 16). Notice the high population density areas (map 17). Is there a geographic relationship between transportation routes and population density? Why or why not?_____

16. Identify the main highways. Think about range and transportation as key concepts in the location of various features. What are two things you notice about main thoroughfares, location of higher and lower order functions, and range of these features?

1. _____

2. _____

17. Finally, let's look at the County High School attendance areas. Look at the high school attendance area map 18. Look at the attendance areas by population density (map 19). Which 5 schools have the highest population density attendance areas?_____

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14. Look at the streets map again (map 10). What relationship or pattern do you notice about urban sprawl? Think about transportation, land value and now population densities.

    _____

    _____

15. Look at the maps showing demographic variables by high school (maps 20-32). Choose 3 variables which are economic factors. Choose 2 variables which are educational factors (maps 33-45) (like test scores or graduation rates). Pick variables you have not used yet. Is there a relationship between economic and educational factors? What might that relationship be? Write a paragraph explaining the relationships between economic and educational factors.

20. Having observed patterns about our county, let's look at these issues on the international arena and see what patterns might exist. Look at the world economic variables (maps 46-55) and some educational variables (maps 56-60) and compare if your observations above are globally true also. Write up your argument below.